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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,974	01/07/2002	Jozeph Robert Marcin	13137.0031	4254

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EXAMINER

THOMPSON, KENNETH L

ART UNIT PAPER NUMBER

3679

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/041,974

Applicant(s)

MARCIN ET AL.

Examiner

Kenn Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Cochran et al., U.S. 3,180,419.

Regarding claim 1, Cochran et al. discloses in figures 1-4 a liner hanger. Cochran et al. discloses a casing mandrel (30) a cone assembly (12,15,17) journaled on the casing mandrel. Cochran et al. discloses a slot (10 at 25) on an outer wall of the casing mandrel. Cochran et al. discloses a groove (23), at least partially annular, on an inside surface of the cone assembly oriented with the slot. Cochran et al. discloses at least one wire (25) situated in the slot and the groove.

As to claim 2, Cochran et al. discloses are a plurality of slots (24,30a), and a plurality of grooves (23,12 at 34) oriented with the slots.

Regarding claim 4, Cochran et al. discloses at least one indent (10 at 25, 21) in the liner hanger body outer wall. Cochran et al. discloses at least one indent (23) in an inner surface of the cones; and a plurality of bearings (24,20) at least partially located in the indent in the liner hanger body outer wall (33) and at least partially in the indent in

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the inner surface of the cones (15,17,12) to resist axial movement of the cones relative to the liner hanger body.

Regarding claim 5, Cochran et al. discloses at least one indent (10 at 25, 21) in the liner hanger body outer wall (33). Cochran et al. discloses at least one indent (23) in an inner surface of the cones. Cochran et al. discloses a wire (25) radially located in the indent in the liner hanger body outer wall and in the indent in the inner surface of the cones to resist axial movement of the cones relative to the liner hanger body.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cochran et al., U.S. 3,180,419 in view of Shallenberger et al., U.S. 4,855,100.

As to claim 3, Cochran et al. discloses the slot and groove. Cochran et al. does not disclose a single helical slot oriented with a single helical groove. Shallenberger teaches in figures 20-24 use of a single helical slot (98) oriented with a single helical groove (106) to allow for insertion of a coil (104) to provide a vibration and impact resistant connection (col. 8, line 64 – col. 9, line 5). It would have been obvious to one

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having ordinary skill in the art at the time of the invention to modify the slot and groove disclosed by Cochran et al. to be a single helical slot oriented with a single helical groove, as taught by Shallenberger et al. to allow for insertion of a coil to provide a vibration and impact resistant connection which prevents inadvertent loosening.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Devenyi, U.S. 6,288,855 discloses a similar wire.

Watkins et al., U.S. 5,515,917 discloses a similar plurality of wires.

Yikley et al., U.S. 6,655,456; Setterberg, Jr. et al., U.S. 4,441,553 and Randermann, Jr., U.S. 3,623,551 discloses a similar system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



17 February 2004